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See Page 2 for Conversion Details

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954 American	10/-	955 American	10/-
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1S5	10/-	7C7	10/-
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2075 Kc.	7012 Kc.	7118 Kc.	8138 Kc.
2716 Kc.	7013 Kc.	7121 Kc.	8120 Kc.
3482.5 Kc.	7020 Kc.	7125 Kc.	8488 Kc.
3503 Kc.	7021 Kc.	7126 Kc.	8500 Kc.
3509 Kc.	7022 Kc.	7130 Kc.	9125 Kc.
3511 Kc.	7023 Kc.	7134 Kc.	10 Mc.
3512 Kc.	7031 Kc.	7145 Kc.	10.511 Mc.
3515 Kc.	7032 Kc.	7156 Kc.	10.524 Mc.
3516 Kc.	7032.6 Kc.	7163 Kc.	10.530 Mc.
3528 Kc.	7048 Kc.	7174 Kc.	10.536 Mc.
3532 Kc.	7052 Kc.	7179 Kc.	10.544 Mc.
3539.3 Kc.	7062 Kc.	7202.3 Kc.	10.546 Mc.
3634 Kc.	7063 Kc.	8000 Kc.	10.563 Mc.
3640 Kc.	7064 Kc.	8017.5 Kc.	11 Mc.
3675 Kc.	7065 Kc.	8027 Kc.	12.893 Mc.
4285 Kc.	7072 Kc.	8028.5 Kc.	14.020 Mc.
4600 Kc.	7089 Kc.	8092 Kc.	14.105 Mc.
4600 Kc.	7090 Kc.	8155.71 Kc.	14.325 Mc.
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All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

**VK3WI:** Sundays, 1100 hours EST, 7146 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK3WI. Intra-state working frequency, 7125 Kc.

**VK3WI:** Sundays, 1130 hours EST, simultaneously on 3273 and 7146 Kc., 51.016 and 149.35 Mc. Intra-state working frequency 7130 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

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**VK7WI:** Sundays, at 1000 hours EST, on 7146 Kc. and 144.3 Mc. No frequency checks available.

# AMATEUR RADIO

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

Published by the Wireless Institute of Australia,  
C.O.R. House, 191 Queen Street,  
Melbourne, C.I.

**EDITORIAL**

## TELEVISION AND THE PROGRESSIVE AMATEUR

Exactly five years ago "Amateur Radio" published one of its first editorials concerning Television and discussed the necessity for members taking an interest in new techniques with regard to the prevention of harmonic radiation.

This raises the question of how many Amateurs do keep pace with modern electronic developments. Some, fortunately, due to their vocation, are of necessity required to give their attention to the progress of their particular science. Some, however, follow more mundane paths of life and the media of their hobby is only participated in during leisure hours.

At this juncture it is worth noting that progressive science does not wait for its friends and the Amateur must spend some of his time mastering new problems, studying new ideas, and experimenting with new pieces of equipment. The nearness of Tele-

vision and its kindred t.v.i. offers a convenient starting place for this renaissance.

With new fields of endeavour and new methodology, the Amateur will find a world where he will regain some of the delights of discovery he experienced when he first started his career in the world of electronics.

The use of frequency modulation, applications of the cathode ray tube, time bases of various forms, beam antennas and a thousand or more Television developments can be applied with profit to Amateur Radio. A knowledge of principles will pay dividends when the matter of t.v.i. is under consideration.

The progressive Amateur will still be "on the air" when Television arrives, using its advantages and benefiting by its techniques, because he has kept abreast of his hobby.

FEDERAL EXECUTIVE.

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## COMMAND RECEIVER ROUNDUP

**U**NDENIABLY the most popular items of war surplus gear are the "Command Set" Transmitters and Receivers. Because of the tremendous interest they still have for many of our readers, last issue we published an article on the Transmitters. Now we take pleasure in presenting the Receivers.

The most commonly available Command Receivers are the BC453, covering 190-550 Kc.; the BC454, covering 3-6 Mc.; and the BC455, covering 6-9 Mc. They all use the same basic six-tube superheterodyne circuit employing a 12SK7 r.f. stage, a 12K8 mixer, two 12SK7s as i.f., a 12SR7 second detector and b.f.o., and a 12A6 audio amplifier, with the filaments of the 12.6 volt tubes wired in series-parallel for operation from 25 volts.

In the case of the 3 to 6 Mc. unit the i.f. is 1415 Kc., and in the higher frequency model the i.f. is 2830 Kc.

The receivers are quite sensitive and stable, but the two units that cover the Amateur 3.5 and 7 Mc. bands leave much to be desired from the selectivity standpoint. Nevertheless, they make excellent "first" or standby receivers. To improve the selectivity of these two units, the reader is referred to an article by K. B. Pounsett ("A.R." June, 1953, p.2) on Double Conversion of Command Receivers.

The BC43, 190-550 Kc., receiver has proved to be an extremely useful gadget around many Amateur shacks. It uses an 85 Kc. i.f. amplifier, which is very selective. By tuning the main dial to 455 Kc., the standard intermediate frequency of most communications receivers, and using a wire connected to the antenna post of the BC453 with the other end wrapped loosely around the lead from the last i.f. transformer to the second detector in the communications receiver, the combination becomes an extremely selective "dual-conversion" receiver.

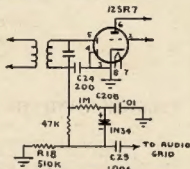
Some Amateurs, however, just take the i.f. transformers from the BC453 to build a selective i.f. channel in less space.

## MODIFYING THE RECEIVERS

To use the receivers in Amateur service entails adding a gain control, a beat-oscillator switch and a phone jack, and building a power supply. Also, as it is easier to obtain 12.6 volts than 25 volts, it is usually necessary to rewire the filaments in parallel for 12 volt operation. When this is done, the six volt equivalents of the original tubes may be substituted and the receivers then operated from a six-volt filament source.

The circuit and values of the components of the Command Receiver in its original form are shown in Fig. 1.

The logical place to mount the new gain control, phone jack, and beat-oscillator switch is on the front panel in the space occupied by the adapter box. Remove the screws holding the box in place. Unplug it and remove the aluminium box holding the socket into which the adapter plugged. Mark the wires that were connected to pins 1, 4, and 5. Remove the rest. Cover the hole in the panel with a flat piece of metal. Then use the wire connected to midrange, 25,000 ohm, variable potentiometer, flanked by a s.p.d.t. toggle switch and a small phone jack.



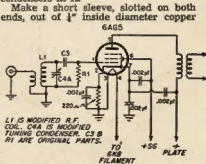
**Fig. 2.—The Noise Limiter Circuit.**

Ground the middle terminal of the potentiometer and one terminal of the switch to the ground lug of the phone jack. Connect the No. 1 wire to the left-hand terminal of the potentiometer (viewed from the back with terminals down), wire No. 5 to the switch, and wire No. 4 to the phone jack.

To rewire the filaments of tubes for parallel operation, ground one filament pin of each tube socket and connect the other filament pins of each socket together and to Pin 2 of the three-terminal plug at the rear of the receiver. Pins 2 and 7 are the filament terminals on all tubes, except the 12SR7, on which they are pins 7 and 8.

Connect power to the three-terminal plug thus: B— and one side of the filament circuit to pin 1; 12 volts a.c. to pin 2; and 200 to 250 volts d.c. at 50 Ma. to pin 3.

**WARNING!** Do not apply more than 250 volts to the receiver; otherwise there is danger of blowing some of the condensers in it.



**Fig. 3.—The New R.F. Stage.**

tubing, and use it as a coupling between the spindled tuning shaft and a piece of  $\frac{1}{8}$ " shafting to which a tuning knob may be attached. A spinner-type knob is very handy for this purpose. Fill the sleeve with some type of adhesive which dries hard, such as Duco cement, before fitting it snugly over the receiver tuning shaft. It will withstand rough usage without coming loose.

Remove the bottom of r.f. stage grid resistor (R2 in Fig. 1) from the a.v.c. circuit, and connect it to ground, to permit this stage to run wide open for increased gain.

A word of caution is here in order. In any of the receivers, do not disturb the wiring between the 12K8 tube and the oscillator coil. In most sets these leads are fastened down with glyptal, and for a very good reason. Shifting these leads will greatly affect the oscillator frequency and stability. Hours of careful work can be ruined by movement of these leads.

A coaxial jack should be installed on the front panel in the place formerly occupied by the old antenna binding post. Merely drill a series of small holes around the circumference of a 5/8" diameter circle, and knock out the centre. Use self-tapping screws to secure the jack to the panel.

Replace the 12SK7 r.f. and i.f. tubes with 12SG7s, to give greater sensitivity and gain.

Use of the station receiver during the conversion of the 14 and 28 Mc. receivers is necessary, as it is a very simple matter to listen to the Command receiver's h.f. oscillator in the station receiver and check its frequency as we make changes. Subtract 1415 from the h.f. oscillator frequency, and you will have the receiver's operating frequency.

To bandspread the 14 Mc. band, the h.f. oscillator will have limits of 15,415 and 15,915 Kc. For the 28 Mc. band, the limits will be 29,415 and 31,115 Kc.

## BANDSPREADING

For the 14 and 28 Mc. bands, the 3-6 Mc. receiver was chosen because their i.f. frequency of 1,415 Kc. offers a good amount of image rejection without sacrificing too much selectivity.

## INCREASING THE BANDSPREAD

### ON 3-6 Mc. RECEIVER

By removing five of the eight rotor plates on the tuning gang, bandwidth can be considerably increased on the BC454 (3-6 Mc.) receiver. Additional padding condensers must be added across the r.f. and oscillator portions of the circuit; 33 pF. NPO ceramics are satisfactory.

Signal to noise ratio can be improved by disconnecting the 620 ohm cathode resistor from the gain control line and grounding.

A good idea for a bandsread scale is to fit a white celluloid scale to the small tuning knob.

On the 7-7.15 Mc. band of the BC455 (6-9.1 Mc.) receiver, this dial will make approximately  $1\frac{1}{2}$  revolutions to cover the band. Calibrations are made on the

\* Compiled from articles by Lt. Paul H. Lee, W4RXO, and Herb S. Brier, W8EGQ, "CQ," May, 1952, and February, 1954, respectively.  
† "Lazy Man's Q5-er," Technical Topics, "QST," January, 1948, p.40.  
‡ "New Simplified Q5-er," W4NRM/WSTCJ, "CQ," July, 1953, p.25; "Triple Conversion for the Communications Receiver," W8SAI, "QST," September, 1948, p.53.





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for use. It is an excellent six-tube superheterodyne, capable of pulling in even weak signals with ease.

## 28 Mc. RECEIVER CONVERSION

The conversion of the receiver for 28 Mc. is performed in a like manner, but with several additional improvements. First, remove the octal r.f. socket, and replace it with a 7-pin miniature socket, for a 6AG5. Replace the 620 ohm cathode resistor R1 (Fig. 1) with a 220 ohm resistor. Remove C6 and connect the small ceramic bypass condensers (as shown in Fig. 3) with as short leads as possible.

From the co-axial jack on the front panel, run a short length of small coaxial cable to terminals 1 and 6 of the oscillator coil socket, using terminal 6 for the shield. Tie terminal 6 to terminal 3 to ground the shield. Connect the 6AG5 filament and the mixer stage filament in series and use a 6K8 as the mixer tube. Each tube draws 0.3 amp. filament current.

Insert a 10,000 ohm 10 watt resistor between R22 and R23 (Fig. 1), to increase the screen voltage to approximately 140 volts. Connect the filaments of the two i.f. tubes in series, and use two 6AC7s in place of the 12SK1s in these sockets. Install the noise limiter circuit as shown in Fig. 2 in the ground return of the second detector diode circuit.

Now remove all but one rotor plate in each section of the tuning condenser, and use 6 turns on the r.f. coil, 5 turns on the mixer coil secondary, 9 turns on the interwound mixer primary, and 5 turns on the oscillator coil grid wind-

ing, all spacewound. Wind a one turn link of insulated wire over the ground end of the r.f. coil, and connect it to terminals 1 and 6 of the coil plug.

Using the station receiver, v.f.o. and frequency as before, align the receiver

for 28-29.7 Mc. coverage. In this case it will be easier to make a new dial plate than to attempt to make the receiver track to the old markings. As before, the final adjustment should be made with the condenser shield cover, and bottom cover, in place.

The preceding paragraphs cover in a few words many hours of work, but the results are well worth the effort. We now have a receiver that is hard to beat for sensitivity and good signal-to-noise ratio on 28 Mc.

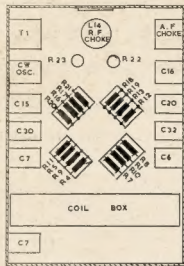


Fig. 4.—Underneath the Chassis.

View of receiver, inverted, and with front panel towards you. There are several other resistors and condensers not shown in the above diagram, but they are easily identifiable by inspection.

## DX C.C. MANAGER WANTED

Federal Executive would be pleased to hear from any member who would be willing to act as DX C.C. Manager. The duties of this interesting position include the checking of QSLs and the listing of the DX C.C. members. The present Manager will assist the incoming Manager in taking over the position.

Kindly forward applications to the Federal Secretary of the Wireless Institute of Australia, Box 2611W, G.P.O., Melbourne, or phone WF 5504.

# Economical Relay Operation

BY H. E. HODGE,\* VK3HE

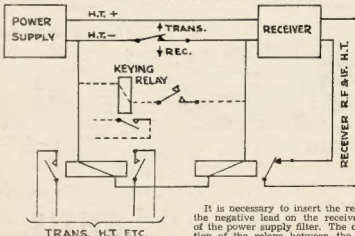
ALTHOUGH convenient, it is not always necessary to have a separate relay power supply available before relay switching of transmitters and receivers can be used. With many types of relays, it is possible to utilise the current drawn by the receiver from its power supply for their operation. The audio stages of the receiver must, of course, run all the time, and the receiver is disabled while transmitting by removing the h.t. from the screens, or screens and plates of the r.f.—and i.f. perhaps—stages of the receiver. This condition is already provided for in some receivers, such as the BC348.

The relays can be connected in various combinations as desired to adjust their current ratings to the receiver current.

This well known method, which is of the "something for nothing" variety, has been in use in the writer's Amateur shack for some years and has been the means of very satisfactory relay operation during that time.

Three different receivers have been used over the years, and each has provided adequate relay power. In the present case, the receiver power supply is a separate unit, and the relays—obtained from a disposals i.f. unit—are inserted in the negative lead from power supply to receiver. While receiving, the relay windings are short-

circuited by the "receive/transmit" switch contacts, preventing their operation, but when the switch is thrown to "transmit," the contacts open—removing the short circuit from the relays, which operate with the receiver current



through them, closing h.t. circuits to transmitter, etc., and breaking the h.t. lead to the r.f. and i.f. tube screens in the receiver.

A fairly large reduction in the current normally drawn by the receiver can be tolerated while transmitting as the current required to hold the relays in, once operated, is much less than that required to operate them in the first instance.

A keying relay may be operated, if desired, by connecting the key and relay in parallel with another relay or relays as shown in sketch, provided that the resistance values are suitable.

It is necessary to insert the relays in the negative lead on the receiver side of the power supply filter. The connection of the relays between the power transformer c.t. and negative was tried and found unsatisfactory, as the a.c. ripple there caused chattering of the relays.

\* 60 Highfield Road, Canterbury, Vic.

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### VALVE LINE-UP:

R.F. Amplifier	— EAF43	Beat Freq. Oscillator	— EAF42
Frequency Changer	— ECH43	Output	— EL42
I.F. Amp. and A.G.C.	— EAF43	Noise Limiter and S Meter	— EB41
A.F. Amp. and Det.	— EAF43	Full Wave Rectifier	— EZ40

**ELECTRICAL PERFORMANCE:** Sensitivity is better than 10 microvolts throughout for a 15 db signal/noise ratio and 50 milliwatts.

**SELECTIVITY:** 30 db down 10 Kc. off resonance. Image ratio better than 15 db at 30 Mc. and greater at lower frequencies.

**AUTOMATIC GAIN CONTROL:** A change of input of 80 db affects the output by less than 25 db.

**5 METER:** A socket at the rear accepts the Ct. No. 809 S Meter.

**FINISH:** Fine black ripple.

Weight 30 lbs.

### DEPOSIT

**£27/3/9**

### Repayments

as low as

**£2/17/1**

per month



**£128/7/7** (inc. Sales Tax, Speaker extra)

Width 16½", depth 10", height 8¾".

## EDDYSTONE MODEL "750"

**FREQUENCY RANGE:** Band 1—32 to 12 Mc.; Band 2—12 to 4.5 Mc.; Band 3—4.5 to 1.7 Mc.; Band 4—1455 to 480 Kc.

### VALVE LINE-UP:

R.F. Amplifier	— 6BA6	N.L., S Meter Diodes	— 6AL5/D77
Mixer (I.F. to 1620 Kc.)	— ECH42	Output	— N78
Oscillator	— 6AM5/Z77	Beat Freq. Oscillator	— 6BA6
Freq. Changer (to 85 Kc.)	— ECH43	Rectifier	— 5Z4G
I.F. Amplifier	— 6BA6	Stabiliser	— VR150/50
Det., A.G.C. and A.F.	— DH77		

**ELECTRICAL PERFORMANCE:** Double Conversion Superheterodyne. Sensitivity is better than 5 microvolts for a 15 db signal/noise ratio.

**SELECTIVITY:** is variable over the range 20 db down 5 Kc. off resonance. Image ratio better than 40 db at 30 Mc., greater at lower freq.

**AUTOMATIC GAIN CONTROL:** Output level is maintained within 15 db for a 90 db change of input, above 3 microvolts at 8 Mc.

**AUDIO OUTPUT:** Max. output is 3.5 watts. Pick-up terminals are fitted and audio stages give linear amplification over a wide frequency range.

**5 METER:** Socket at the rear accepts Cat. No. 609 Signal Strength Meter.

**FINISH:** Fine black ripple.

Weight 40 lbs.

### DEPOSIT

**£43/7/7**

### Repayments

as low as

**£4/3/7**

per month



**£206/18/4** (inc. Sales Tax, Speaker extra)

Width 16½", depth 13¾", height 8¾".

## EDDYSTONE MODEL "680X"

**FREQUENCY RANGES:** Band 1—30 to 12.5 Mc.; Band 2—12.5 to 5.5 Mc.; Band 3—5.5 to 2.5 Mc.; Band 4—2.5 to 1.1 Mc.; Band 5—1120 to 480 Kc.

### CIRCUIT—Fifteen valves perform the following functions—

Two R.F. Amplifiers	— 6BA6	Push-Pull Output	— 6AM5/EL51
Frequency Changer	— 6BD6	Beat Freq. Oscillator	— 6BA6
Separate Oscillator	— 6AM5/Z77	Noise Limiter, S Meter	— 6AL5/D77
Two I.F. Amplifiers	— 6BA6	Rectifier	— 5Z4G
Detector and A.G.C.	— 6AL5/D77	Voltage Stabiliser	— VR150/30
Two Audio Amplifiers	— 6BR7		

**ELECTRICAL PERFORMANCE:** Sensitivity for 50 milliwatts, 15 db signal/noise, 4 microvolts or better on all ranges.

**SELECTIVITY:** Bandwidths at 6 db down—Minimum 14 Kc.; first intermediate 7.5 Kc., second intermediate 4 Kc., maximum 2.5 Kc., and greater with crystal switched in and phased.

**AUTOMATIC GAIN CONTROL:** 9 db change of output for 100 db change of input, above 1 microvolt at 9 Mc.

**FINISH:** Polychromatic Grey.

Weight 47 lbs.

### DEPOSIT

**£69/18/4**

### Repayments

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# 144 Mc. Heterodyne Frequency Meter

DR. ROBERT H. BLACK,\* VK2QZ

IN a previous article†, while discussing an approach to stable variable frequency operation at 144 Mc., it was suggested that the method could readily be applied to the construction of a frequency meter. Such a frequency meter has now been built and this article describes it.

The circuit diagram shows that the crystal oscillator and frequency multiplier are standard—commencing with a crystal in the region of 4.5 Mc., output is obtained (by ten times multiplication) at about 45 Mc. In the author's case the crystal was set up at 44.95 Kc. and output was thus at 44.95 Mc.

to ensure stability of the variable-frequency oscillator.

Calibration consists first of all in accurately measuring the frequency of the crystal. The variable-frequency oscillator is then set so that it covers the required range and is then calibrated at 10 Kc. intervals. A table is drawn up and this calibration is converted to the corresponding 144 Mc. band frequencies. In the present case this latter set of frequencies was obtained by the formula:

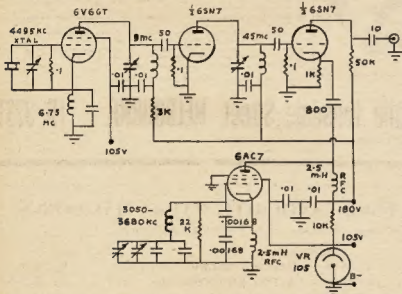
$$144 \text{ Mc. freq.} = 3 (10 \times \text{crystal freq.} + \text{v.f.o. freq.})$$

typed out as a list on several small sheets of paper and bound in a small book with stiff cardboard covers. In addition to the 144 Mc. range, incidentally, the oscillator is calibrated over the 3.5 Mc. band and so its output is available for use on the lower frequency Amateur bands.

A suggested set-up is one using a 5000 Kc. crystal (which can be adjusted accurately to frequency, using WWV) and output from the frequency multiplier at 45 Mc. The 3 Mc. output from a Bendix (perhaps amplified) could then be mixed with the 45 Mc. signal. Measurements at 144 Mc. could then be made with the same ease and order of accuracy which is available with the Bendix at its third harmonic frequency.

To conclude, one must answer the question: "Why bother about accurate frequency measurement on 2 metres?" The author was not able to hear VK2WH, whose frequency is 144.002 Mc., until he set up the receiver on that frequency and waited for the signal to appear—which it did.

It may be suggested that a week spent building a frequency meter is a lot of effort to hear just one signal, but one has heard of types spending months looking for the hundredth or two hundredth country on the lower frequency bands.



The tubes used were 6V6GT/6G6G as triode oscillator with output at 8990 Kc. and one triode of a 6SN7 as a quintupler. The second triode of the 6SN7 was used as the mixer with grid injection at 44.95 Mc. and cathode injection at a frequency varying between 3050 and 3680 Kc. It was found that sufficient output was available at 144 Mc. when a 50,000 ohm resistor was used instead of a coil tuned to either 48 or 144 Mc. in the plate circuit of the mixer.

The variable oscillator uses a 6AC7 in a Clapp circuit. The grid coil was obtained from some disposals gear and the dial gave 3,000 divisions for the 180 degrees excursion of the variable capacitor. The range of the meter at 144 Mc. is from 144,000 to 145,890 Mc.

The screen voltage of the 6AC7 (and of the crystal oscillator) is regulated by a VR105. The whole unit is built in a steel box measuring 7" x 7 1/2" x 5 1/2"; the power supply being a separate unit. The usual structural precautions were taken

Crystal check points were available at three points as shown in the following table:—

V.f.o. Freq.	V.f.o. Harm.	Xtal Harm.	144 Mc. Freq.
3210.7 Kc.	7th	5th	144.482 Mc.
3371.3 Kc.	4th	3rd	144.964 Mc.
3596 Kc.	5th	4th	145.638 Mc.

A further check on the v.f.o. calibration is available using its third harmonic and WWV on 10 Mc.—the corresponding 144 Mc. band frequency being 144.850 Mc.

The signal obtained with no aerial on the output terminal of the meter is adequate for beating with most signals; stronger signals can be reduced by rotating the beam or more output can be obtained from the meter by attaching a small piece of wire to the output terminal. The ease with which zero beat can be obtained with this meter contrasts markedly with the critical tuning when a high-order harmonic of the Bendix is used for frequency measurement at 144 Mc.

The dial readings and the corresponding 3 Mc. and 144 Mc. frequencies were

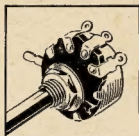
## A.O.C.P. CLASS

The Victorian Division A.O.C.P. Class will commence on Thursday, 3rd February, 1955. Morse and Regulations are held on Monday and Theory on Thursday evenings from 8 to 10 p.m. Persons desirous of being enrolled should communicate with the Secretary W.L.A., Victorian Division, 191 Queen Street, Melbourne (Phone FJ 6997 from 10 a.m. to 4 p.m.), or the Class Manager on either of the above evenings.

## CHANGE OF ADDRESS

W.L.A. members are requested to promptly notify any change of address to their Divisional Secretary, not direct to "Amateur Radio."

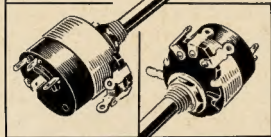
\* "The Chaiet," 3 Yerton Avenue, Hunter's Hill, New South Wales.  
† "Amateur Radio," December, 1954.



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# Writing an Article for "Amateur Radio"

Dear Reader,

One of the purposes of this magazine is to publish technical articles. One of the biggest headaches of the Magazine Committee (and in particular of the Technical Editor) is the continual shortage of articles.

From what we hear on the air, there are enough people doing interesting things to positively flood us out with articles. But the articles never arrive, the pen is never put to paper. Why?

Strangely enough, one of the commonest reasons seems to be just plain shyness at committing things to print. Next is ignorance of how to go about it. Well, we do want YOUR article and if you read on we will tell you how to go about it.

## WHAT CAN YOU WRITE ABOUT?

Anything which may be of interest to any other Amateur. If it interests more than one, so much the better. The easiest thing to write about is something you have built, big or small. (There is a terrific demand for small articles of the Hints and Kinks variety.) Test equipment, v.h.f., mobile, antennae, gear for the newcomer, receivers, transmitters are all needed. There is also a place for theoretical or instructional articles, but don't try these without a bit of experience. If in doubt, ask the Editor if he thinks the subject would make a suitable article.

## HOW DO YOU WRITE IT?

Technical articles should be written in as simple and direct a manner as possible. The "level" should be chosen to suit the subject and the type of reader for whom the article is intended. Most articles will be intended for that mythical being, the average reader. Simple sentences are usually far more effective than long involved sentences.

Plan your article along logical lines so that the reader does not have to jump backwards and forwards between the various sections. For example, a simple constructional article could be organised as follows:—

Introduction: Scope and aim of the article, advantages of the equipment, etc.

Circuit: General description.

Layout and Construction: Special features.

Operational Details: Alignment, testing, etc.

Results achieved.

If possible, type your article and always use double spacing; otherwise use lined paper and remember that your article will have to be read by printers and other persons who may not be acquainted with technical terms, so write legibly. For preference use a paper size of 8" wide by 5 1/2" deep (half quarto) and leave 1" margins. The printer, quite rightly, charges us for the extra time involved in handling articles written on the backs of tram tickets, brown paper, confetti, etc.

Write on one side only, number each sheet, and write your name and the title on each sheet.

Articles should be as brief and concise as possible; "padding" should be avoided at all costs. Never hesitate to submit an article simply because it appears to be of less than average length.

Use standard English and avoid jargon such as "short" for "short circuit," "amp." for "current," "volts" for "voltage," etc.

When finished, get someone to read it out aloud. You will soon see if it has continuity and is legible to a person other than yourself.

Sketches and circuit diagrams should be drawn on separate sheets of paper with the figure number, title and your name on the top. Almost invariably these will have to be re-drawn by our volunteer draughtsmen. This is one of the hardest yet least known jobs of the Magazine Committee. If you have draughting knowledge or can get it done by a friend, then help us to ease the draughting bottleneck by supplying circuit diagrams ready for the block makers.

The width is the important measurement. If the drawing will occupy one column in width, make your drawing 4 1/2" wide, as it will be reduced in processing to half size. Two and three column drawings should be 8" and 13 1/2" wide respectively.

All lettering should be 3/16" high and make all lines heavy to help reproduction.

To avoid wastage of block costs, all lettering should be kept within the confines of the drawing; we have to pay on the maximum width and height taken by the block maker, in calculating the cost.

At present we cannot afford to print photographs, the blocks cost too much. But we are always happy to print photographs if the author supplies the blocks.

As the circuit is usually the heart of the article, you cannot take too much care in seeing that it is correct, that the values of all components are given and that it is arranged so as to be easily read. There are two systems for giving the component values: one is to print the value by the component, the other is to label them R1, R2—C1, C2—L1, L2, etc., and give a table of values underneath. The first system is probably easier to prepare and to read, whilst the second is the only way of stating voltage ratings, wattages, etc., of components. We have no fixed ideas as to which to use. Probably a compromise system is best where usual components are marked with values and unusual components marked R1, etc., and commented on underneath.

## WHAT THEN?

Having written the article and prepared the diagrams, send them to the Sub-Editor of your State. His address appears in the heading of Federal and Divisional Notes in the March, June, September and December issues of "Amateur Radio." The Sub-Editor col-

lects all notes and articles for the State and sends them to the Editor. On receipt here, the Secretary of the Victorian Division will acknowledge receipt to both the Author and the Sub-Editor concerned. If you do not receive acknowledgment in say three or four weeks, contact your Sub-Editor and ask him what's happening.

The normal delay for draughting, block-making, and type setting is about six weeks. Articles and blocks have to be in the printer's hands not later than the first of the month prior to the month of publication. So the shortest possible time in which an article can be published is approximately three months. Circuits which involve a lot of draughting might take longer.

Looking forward to your article,

We remain, your humble servants,  
THE MAGAZINE COMMITTEE.

## AWARDS FOR TECHNICAL ARTICLES

The Council of the Victorian Division, W.I.A., have decided to make an annual award of up to £5 available for the best article or articles printed in "Amateur Radio" from July issue to June issue of the following year. The judging to be carried out by the Magazine Committee of "Amateur Radio."

## A.R.R.L. CONTEST

Phone: Feb. 11-13 and March 11-13  
C.W.: Feb. 25-27 and March 25-27

In the 21st A.R.R.L. Contest two week-ends are devoted to c.w. and two to phone operation. The rules are the same as those of last year, with this exception: U.S. and Canadian Amateurs will send a signal report plus their State or Province (instead of indicating input power). This information is of special interest to overseas stations aiming to fill in States for W.A.S. and Provinces for W.A.V.E.

Phone Section: 2400 hours GMT Feb. 11 to 2400 hours GMT Feb. 13; 2400 hours Mar. 11 to 2400 hours Mar. 13.  
C.W. Section: 2400 hours GMT Feb. 25 to 2400 hours GMT Feb. 27; 2400 hours Mar. 25 to 2400 hours Mar. 27.

## ERRATA

In the article, "An Electronic Keyer," December, 1954, issue, the author has drawn our attention to some errors in same. Under the heading of "Circuit," line 14, R5 should read R6. In Fig. 1 the 1 meg. resistor in plate circuit of V1 should read R6. In the same diagram the power supply symbols should be reversed, i.e. h.t. positive is earthed and h.t. negative connected to circuitry.

# NATIONAL FIELD DAY, 1955

## RULES

1. The National Field Day Contest of the Wireless Institute of Australia will be held on **Sunday, 6th March, 1955**. The Contest will be of 12 hours' duration, commencing at 0900 hours E.A.S.T. and will continue until 2100 hours E.A.S.T.

2. The Contest is limited to portable stations operating within the Commonwealth and its Mandated Territories on a power not exceeding 25 watts input to the final stage with the aerial connected,

with a special section for fixed stations working to portable stations, and a special multiplier which, it is again hoped, will encourage the use of low power equipment.

3. A portable station for the purpose of the Contest is defined as one whose power is not derived from either private or public mains, shall not be located closer than five miles afloat from the home of the operator(s) and shall not be situated in any occupied dwelling or building.

4. No apparatus is to be set up or erected on the site of the portable station earlier than 24 hours prior to the commencement of the Contest. A station may be moved from one site within a State to another within the same State during the Contest.

5. More than one operator may be used in the operation of the portable station, provided that all operators are licensed Amateurs.

6. Operation may be on any of the recognised Amateur bands, and more than one transmitter may be used, providing that only one transmitter is used at any one time.

7. When calling, c.w. stations will use the call "CQ NFD," and phone stations will use the call "CQ National Field Day" to indicate that they are portable stations. Attention is directed to the requirements for portable operation as defined in the P.M.G. Handbook for the Guidance of Amateur Operators.

8. Sections: The Contest is divided into four sections, namely:—

- (a) Open.
- (b) C.w.,
- (c) Phone,
- (d) Fixed Station.

The open section will consist of phone and c.w. Portable station participants may enter each of sections (a), (b), and (c), provided a separate log is entered in each case.

9. Logs must be forwarded to the Contest Committee through the Divisional Council for membership checking in time to reach Box 1234K, G.P.O., Adelaide, not later than Saturday, 2nd April, 1955.

10. Logs must be filled in in the following order: Date, Time (E.A.S.T.), Band, Emission, Power Input to the final stage with the aerial connected, Call Sign of the Station contacted, RST number sent, RST number received, location of station contacted, points claimed. The log must be headed with the title of the Contest, section entered, call sign of the competitor, location of the station. At the conclusion of the log a summary of contacts must be shown together with a description of the equipment used including h.t. voltage to the final stage, tube(s) in p.a. stage, antenna used, and call signs of all operators.

11. The completed log must be signed by each of the operators with a statement that the P.M.G. Regulations and the rules of the Contest have been observed.

12. The decisions of the Federal Contest Committee will be final in all matters concerning the Contest.

13. Failure to completely observe the conditions of rule 10 will lead to automatic disqualification of a competitor.

14. **Scoring:** For the purpose of the Field Day the following constitute VK Districts. VK2, VK3, VK4, VK5 (South Australia), VK5 (Northern Territory), VK6, VK7, VK9.

15. Serial numbers must be exchanged during the Contest. Failure to record current serial numbers will mean loss of all points for that contact. Serial numbers will be as follows. The first three figures will be the RST report in the c.w. section, followed by the serial number of the contact. Serial numbers may commence with any number between 001 and 100 for the first contact, increasing by one for each successive contact. In the phone section the first two figures will be the RS report as in the c.w. section, followed by the three serial numbers. In addition, the QTH must be given in all cases.

16. Points will be awarded as follows:

### Portable Stations—

- (a) For contacts with a fixed station within the Commonwealth (Rule 14) including the competitor's own State . . . . . **1 point.**
- (b) For contacts with other portable stations within the same State . . . . . **2 points.**
- (c) For contacts with stations in Asia, Oceania, North America, 3 points.
- (d) For contacts with stations in other countries other than (a), (b) and (c) . . . . . **5 points.**
- (e) For contacts with other portable stations outside the competitor's own State . . . . . **10 points.**

In order to encourage QRP operation, for portable stations, the total number of points scored will be divided by the power input in watts (with the aerial connected).

If more than one transmitter and/or input power is used for portable contact purposes, the "power in watts" will be calculated as the average.

### Fixed Stations—

- (f) For contacts with portable stations in the Contest within the same State . . . . . **2 points.**
- (g) For contacts with portable stations in the Contest outside the State . . . . . **5 points.**

17. **Awards.** An attractive certificate will be forwarded to the outright winners in each section, namely, Open, Phone, and C.w. Certificates will also be awarded to the winners of each section in each State, and to the fixed station in each State with the greatest number of points gained in contacting portable stations in the Contest. Further certificates may be awarded at the discretion of the Federal Contest Committee. The outright winners are not eligible for State Awards.

18. Certificates will be awarded to each operator of the winning stations, provided each operator has contacted at least 25% of the stations contacted.

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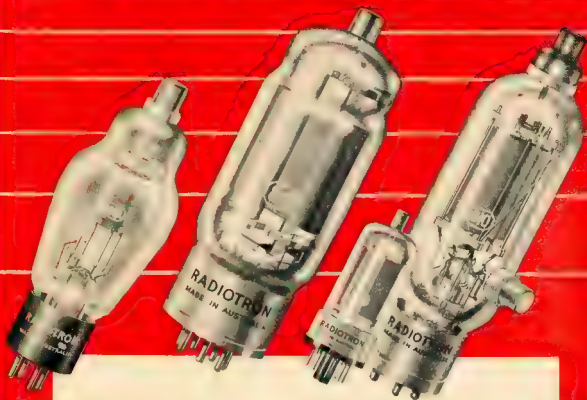
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 2WO—H. F. Owen, 31 Walton St., Blakehurst  
 2ABO—J. J. Brown, 100 Wooloware Rd., Bur-ranagee Bay, Cronulla  
 2AFL—G. J. Lee, 113 Victoria Rd., West Ryde  
 2ALR—L. R. Burston, Officers' Mess, R.A.A.F. Station, Canberra, A.C.T.  
 2ANP—Naval Base, Sydney, Amateur Radio Station, East Aust. Area, Potts Point  
 2AVW—G. A. Warner, C/o O.T.C. Bringly, 22AT—J. Wakefield, Hargrave St., Armidale

## Victoria

- 2DX—G. W. Hiltch, 31 O'Hara St., Blackburn  
 2AJL—W. R. Adey, 16 George St., Ashwood, S.E.1.  
 2AQM—H. P. Morris, Station, Yacht "Pan-dora," Port Phillip Bay; Postal: 1 Raven St., Kew, E.A.  
 2ZAG—J. W. Herbert, 7 Lower Main St., Stawell

## Queensland

- 4BE—A. F. W. Taylor, C/o Dept. of Civil Aviation, Aerodrome Station, Townsville  
 4CM—W. A. McDivitt, 149 Esplanade, Cairns  
 4ZAS—L. L. Sharp, 9 Dora St., Moorekook, Brisbane

## South Australia

- 5DW—D. W. Tacey, 23 Main Ave., Freer-ville  
 8FY—R. A. Catmur, C/o Mr. A. V. Fergusson, Eighth St., Gawler West

## Western Australia

- 6ZAM—M. R. McHenry, 88 Kalamunda Rd., Kalamunda

## Tasmania

- 7PH—N. G. Williams, Launceston Airport, Free Bag Service, P.O., Launceston  
 7ZAH—J. Rodkinson, Wellington St., Long-ford

## Territories

- 1DC—D. R. L. Callow, Macquarie Island (Temp. Station)  
 1ZM—B. E. Shaw, Macquarie Island  
 6OQ—D. F. Lloyd, C/o O.T.C. Receiving Sta-tion, Port Moresby  
 6TC—T. M. Cole, C/o R.T.C., Wewak  
 6YG—G. E. Smith, C/o Weather Office, Norfolk Island

## ALTERATIONS

- New South Wales**  
 2KR—7 Felton Street, Woy Woy  
 2OE—38 Flanders Avenue, Murrumbidgee 3N  
 2TE—37 Estelle Street, Maryville, Newcastle  
 2VQ—51 Lauderdale Avenue, Manly  
 2AAH—37 Myrna Road, Strathfield  
 2ACM—C/o Dept. of Civil Aviation, Radio Construction, P.O. Box 41, Mascot  
 2ACS—Station 32 Rue Circé, Griffith; Postal: Box 63, Griffith  
 2ARD—East Camp, S.M.A., Cooma  
 2AST—228 Concord Road, Concord West

## Victoria

- 2AB—18 Doncaster Road, North Balwyn  
 2BR—Police Station, Tugunmalanga  
 3IC—Yacht "Southlander," Hobsons Bay Yacht Club, Williamstown  
 3KP—4 Parkside Street, Malvern, S.E.4  
 3NH—18 David Street, Preston  
 3UE—12 Jellicoe Street, Box Hill South  
 3AAC—3 Boorool Road, East Kew  
 3AEC—C/o Post Office, Balindaale  
 3AKC—8 Crisp Street, Vangaratta  
 3ALN—3 Farmers Street, Nhill  
 3APK—Ward 10, Geelong Hospital  
 3ARI—24 King Street, Ballarat East  
 3ARY—33 Washington Street, Essendon  
 3AXX—Station 5 Paterson St., Carrum, Postal Box 127A, Elizabeth St., P.O., Melbourne

## South Australia

- 3AO—19 Hardy Street, Goodwood Park  
 3BE—4 James Street, Plympton  
 3KH Mills Road Eden Hills  
 5KJ 60 Hillwood Crescent, Millwood Estate

## Western Australia

- 6KU—25 Garloch Street, Applecross  
 6SK—Lot 88, Evans Road, Mt. Helena

## Tasmania

- 7CJ—C/o "NT Radio Station Keta"  
 7MC—55 Paterson Crescent, George Town  
 78F—4 Mark Street, Hillcrest, Burnie

## Territories

- 5VG—C/o Dept. of Posts and Telegraphs, Lee  
 5WK—C/o R.T.C., Madang

## DELETIONS

- New South Wales** VKs 2ZK (now operating under VKAB1), 2AAU, 2AQO (now operating under VK9Q4), 2AKM (now operating under VK4X1)  
**Victoria** VKs 3BN, 3DW (now operating under VK5DW), 3GP, 3KT, 3PI (now operating under VK7PH), 3SU, 3YG (now operating under VK9YV)  
**Queensland** VKs 4BN, 4LQ (now operating under VK2ALR)  
**South Australia** VK5WJ  
**Western Australia** VK6DJ  
**Territories** VKs 1BA, 1LL, 9GW (now operating under VK2AVW)

## FOR MONTH OF DECEMBER, 1954

## ADDITIONS

- New South Wales**  
 2SD—L. W. N. Squires, 27 Fletcher St., Bondi  
 2AV—P. W. Randall, 5 Chisholm St., Inverill  
 2AVI—A. Isaacs, 43 Tupper St., Marrickville  
 2AXP—W. Porter, 11 Telopia Ave., Carlingbah  
 2AZS—D. Selars, 20 Sandringham St., Sans Souci, Sydney  
 2ZAS—D. R. Russell, "The Nook," Oakes Rd., West Pennant Hills

## Victoria

- 3JB—R. S. Beckett, No. 8 Married Quarters, School of Signals, Balcombe  
 3AED—P. A. Delahanty, Station 33 Piccadilly St., Oakleigh; Postal: 21 Toward St., Murrumbidgee  
 3AHU—H. C. Diber, Mornington Rd., Frankston  
 3AIW—L. R. Weiler, Main St., Merrigum  
 3AKT—M. K. Tulloch, Fernshaw Rd., Healesville  
 3AQK—R. J. Hildebrand, 133 Simpson St., East Melbourne  
 3ZAJ—J. I. Kelleher, 3 Faine St., Newport, W.18  
 3ZAD—D. H. V. Rankin, 1879 Malvern Rd., East Melbourne, S.E.3  
 3ZBH—R. J. Harrison, 7 Tintern St., Foot-scay, W.11  
 3ZBS—R. M. Stures, 17 Daffodil St., Wendouree West  
 3ZBW—D. G. Walker, The Lodge, Ormond Col-lege, Carlton, N.2  
**Queensland**  
 4VR—L. D. Rickaby, 33 Babbidge St., Coopers Plains, Brisbane  
 4ZAF—D. A. Fraser, Station: Cr. Locke and Ann Sts., Warwick; Postal: P.O. Box 131, Warwick

- South Australia**  
 5ZB—E. R. Stephenson, 4 Piccadilly Circus, Colonel Light Gardens  
 5ZAB—B. C. Jellitt, Norton Vale, Hynam  
 5ZAT—G. P. Tuck, 57 Cowra St., Mile End, Adelaide  
**Western Australia**  
 6ZAQ—D. A. Meadowcroft, 132 Eton St., North Perth  
 6ZAS—J. J. Stewart, 95 Railway Pde., Mt. Lawley  
**Tasmania**  
 7IJ—D. R. Twigg, C/o D.C.A., Cambridge Air-port, Hobart  
 7RN—R. D. Nichols, 30 Pearl St., Vivienne  
 7ZAB—P. E. Blundstone, "Barclay," White-mark, Flinders Island  
 7ZAC—D. G. Cartwright, 38 Mary St., Launceston

## Territories

- 1HR—H. J. Hicks, Macquarie Island  
 9VW—G. Stoble, C/o Post Office, Port Moresby

## ALTERATIONS

- New South Wales**  
 2EI—38 Fuller's Road, Chateauwood  
 2MX—Korisset Road, Cooranbong, 1N  
 23Q—19 Jubilee Street, Dubbo  
 2AKN—21 Urunga Street, Balgowlah  
 2ASG—3 Duke Street, Grafton

## Victoria

- 3PW—3 Kharatoun Street, Caulfield  
 3QC—Tone Road, Wangaratta  
 3VQ—4 Burgess Street, Beaumaris, S.10  
 3XJ—11 Vialis Avenue, Parkdale  
 3AMH—Station Walker St., Ballarat North; Postal: 208 Eyre St., Ballarat  
 3AND—Coorin Avenue, Rosanna  
 3ARI—13 Barkly Street, Ballarat

## South Australia

- 3KK—297 Goodwood Road, Kings Park  
 3SR—46 McDonald Avenue, New Hindmarsh  
 7BL—Kelvedon Avenue, Terroona

## Tasmania

- 7RC—Station: Western Junction Airport, Postal: C/o D.C.A., P.O. Box 418, Launceston

## DELETIONS

- New South Wales** VKKCC  
**Victoria** VKs 3IJ (now operating under VK7IJ), 3JV (now operating under VK6VW), 3AC  
**Tasmania** VK7ZAD (now operating under VK7RN)

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**MIC 36**



£6/18/6

Housed in attractive plastic case, this Microphone is ideal for home recording and public address, etc. Response unexcelled for its size and price. The performance is not affected by vibration, shock or low frequency wind noise. Omni-directional frequency response substantially flat from 30 to 7000 c.p.s. Recommended load resistance not less than 1 megohm dependent on low frequency response. Can be supplied complete with switch and floor stand adaptor as required at a small extra cost.

Designed to meet even the most exacting requirements, this Microphone incorporates the world famous floating crystal sound cell construction. Its special characteristics are that its fine performance is not affected by vibration or shock. The fidelity is not impaired by low frequency wind noise.

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Output level —55 db ref. 1 volt/dyne/cm<sup>2</sup>.  
Frequency response—substantially flat from 30 c.p.s. to 10,000 c.p.s.  
Directivity—non-directional.  
Size—2½" spherical diameter.  
Connector—Standard international 3-pin.

**MIC 16**



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This omni-directional Microphone is robust in construction, with a pleasing appearance. Vibration, shock or low frequency wind noise will not affect the performance. The low frequency cut-off is dependent on the load resistance. The cut-off is given by the quotation,  $F = 80 \div R$ , where  $F$  = c.p.s.,  $R$  = megohms. An adaptor (floor mounting) is available at low extra cost.

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Output level = —50 db ref. 1 volt/dyne/cm<sup>2</sup>  
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Recommended load resistance—not less than 1 megohm, dependent on low frequency response

**MIC 22**



**MIC 28**



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Designed to give freedom of movement, this Microphone is small and non-directional. Housed in a soft moulded rubber case, which gives protection against shock, it is provided with a pin at the rear of the case for pinning to the lapel.

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Output level—approx. —55 db ref. 1 volt/dyne/cm<sup>2</sup>.  
Recommended load resistance—5 megohms.  
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Capacity—0.0015 uF. at 1000 c.p.s.  
Impedance—100,000 ohms at 1600 c.p.s.  
Cord—6 ft. shielded cable.  
Size—1-9/16" wide x 2½" long x 1" thick.

**MIC 35**



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The MIC 35, undoubtedly the best value ever offered, is ideal for amateur transmitters, public address, etc. Housed in an attractive die-cast case, it features a high sensitivity and substantially flat characteristics. Provided with a built-in shunt resistance of 2 megohms, it will, when connected to the grid of the input valve, give a

## SPECIFICATION

Output level: —55 db ref. 1 volt/dyne/cm<sup>2</sup>.  
Cable—approx. 4 ft. of co-axial supplied.  
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Dimensions—microphone only 2½" x 2½" x 1"

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**MIC 33**



£6/18/6

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These inserts are available in varying sizes ranging from as small as 15/16" square to 1-13/16" round, with various thicknesses from 7/32" to 9/16". Suitable for every purpose such as hearing aids, public address, tape recording, amateur broadcasting, etc., they have responses from 2250 c.p.s. to 3500 c.p.s. at 5 db to 30 db. Insert can be supplied with or without 10 meg. resistor as required.

MIC 32 insert, £2/15/6; all others, £1/19/6.



(MIC 32 illustrated)

## MICROPHONE INSERTS



(MIC 23 illustrated)

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Type M175-7.5-15 watts.  
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Type 763-15 watts.  
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and 100 ohms.

Type 806-15 watts.  
Prim.: 10,000, 5,000 ohms  
P.P.  
Sec.: 15, 12.5, 5, 3.7 and  
2 ohms.

Type 907-15 watts.  
Prim.: 10,000, 5,000 ohms  
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# FEDERAL, QSL, and DIVISIONAL NOTES

## FEDERAL

### DX C.C. CERTIFICATES

Interest in the competition for the designing of this Certificate has been growing since the first one to what is required in the matter of wording.

On the old Certificate the letters "DX C.C." were given to the winner. "Victorian" was given to the Institute of Australia. This was followed with "Certificate of Award granted to on having established two-way radio communication with one hundred countries," together with spaces for signatures of Federal President, Federal Secretary, Date of Issue, and Certificate Number.

### T.V.I. BOOKLETS

Many members have already sent for and received the latest edition of Remington Rand's informative book on T.V.I. Executive were fortunate in obtaining a generous supply of these booklets with the result that they are still available. However the number is limited. Members desiring a copy are requested to send a letter to the Federal Secretary together with 1d. in stamps.

### DX C.C. MANAGER

After many years of sterling service the DX C.C. Manager, Geo. Morris, VK3BZ, has indicated that he wishes to relinquish his duties. Many who have enjoyed his services and the award of DX C.C. are indebted to Geo, who has had to carry out the necessary checking and arranging for certificates.

In view of this forthcoming resignation, Federal Executive is looking for a successor to Geo and those interested are referred to the announcement in another page of this issue. Here is a splendid opportunity for some interested person to carry out a very worthwhile and informative undertaking.

### HANDBOOK FOR OPERATORS OF AMATEUR WIRELESS STATIONS, 1954 EDITION

The Amateur Administration has announced that the 1954 Edition of the Handbook for Operators of Amateur Wireless Stations is now available from the office of the Administration in Melbourne. It is available from the Amateur Wireless Branch, in the various States.

This book is prescribed for examination purposes and is written in a simple and concise manner. It is for this purpose. Besides this, paragraphs relevant to Limited A.O.C.F. are now included.

## FEDERAL QSL MANAGER

### BAT JONES, VK3RI, MANAGER

The Junta Central Fallera, Valencia (Spain), a special bureau for the world's most famous Festival of Arts, has organized together with the U.R.E., a competition to be staged between 1st November, 1954 and 31st January, 1955. The contest consisted of communicating with all stations situated in Valencia. Diplomas and badges will be awarded to the winning stations. For stations situated in Valencia, a minimum of two contacts were required before an application for an award could be made. Applications for awards together with confirmed QSL cards must be made to U.R.E. Apartado de Correo No. 3, Valencia, Spain. Like most of the contests staged by European countries, the particular rules will be forwarded to you if you do not reach here until the contest was almost over.

News from Bill Storer, VK1GQ, as at 23rd December. Bill had run up a total of 105 countries to that date. Shortly before Xmas, Bill had planned to go to the States and had been acquainted in the hydraulic system of a tractor. Fortunately no bones were broken, but the injury was painful and necessitated Bill sending his official QSLs to his left hand, a very painful and laborious undertaking. The injury also kept him off the Amateur bands for a period. He is looking forward to his return to VK and to his impending marriage. Reckon Roy 473 should loan Bill his new Mark VII. Bill is the honeymoon—it's just a suggestion, Roy.

Chas VK1AC, now back in Australia, speaking to the writer from Macquarie a few days prior to his departure, expressed his disappointment at not making the 100 countries. Chas had run up 98 to that stage, but despaired of adding to that total before he left. Chas had Chas, many knowledgeable DX men during their stay down there could only manage much less. Bill Storer, who VK1BZ could only manage 60 South Western Europe, the Mediterranean, Northern Africa and South America are particularly difficult to QSO from Macquarie.

The following gratifying letter has been received from Ray Herbert, 3A9AL/VSSKU/

GZKU. I quote: "For the last few weeks I have been operating VSSKU, from the Shell Co. Rest House at Seria, Brunel. The station has been in the vicinity of Seria, Malaya, to England today (22nd December). Operation has been on 14 Mc c.w only and about 280 VKs and ZLs have been worked, the contact being a new country to most of them. Due to air travel, the gear had to be very simple. The rx is the size of a box camera, and weighs under 2 lb. It is four tubes superhet. The tx is on a QSL sized chassis and ran at 30 watts; weight, 2 lb. The VKs and ZLs worked were very good behavior, many calling me by name and always ready to help with information of other DX calling. QSLs will be sent out in February on a one-page one-half QSL to the call book QTH of GZKU 9 Baldwin Avenue, Eastbourne, Sussex, England. Please pass on my thanks and TX all for many pleasant QSOs." quite a pleasure and a refreshing change to receive such letters and am glad to have you mentioned in the negative. However, I do not see many of the outward bound cards.

Have enquiries as to whether any cards have been sighted from VK1AF and VK1RL, but must answer in the negative. However, I do not see many of the outward bound cards.

## NEW SOUTH WALES

The December monthly meeting of the W.I.A. (N.S.W. Div.) was held at Science House, Gloucester Street, Sydney, on 17th December. 140+ City residents and 100+ visitors were present and after the usual introductory features, the President outlined the objectives of the Division, reported on the work of the Executive Committee. A detailed report on the work of the Division was given by the President. He has been to acquire a home for 2WI was outlined by the Secretary, who also reported on the work done by the committee of which he is the chairman. And we feel that most members were agreeably surprised at the amount of work which the Division has done in the past project. A motion was passed empowering the committee to proceed with the negotiations in regard to report to Council from time to time.

The Adams Cup was presented to the winner, N. Southwell, 2ZF, and all were pleased to see this Cup presented to him for the second successive year.

The lecture for the evening followed, delivered by Noel Jones, VK3RI, being James Slideband Exciters. Noel made his lecture interesting and informative, delving deeply into the intricacies of the slideband exciter. He convinced many of the attentive audience that s.s.b. transmission had many advantages over the technique more commonly employed. The vote of thanks was moved by the President and carried by acclamation.

Owing to the holiday atmosphere at present prevailing in the whole State, we have no reports from correspondents this month but hope that the coming weeks will show a change for the better. We wish to say that the main gleamings of all bands this month appear to show that all had a good Xmas and it appeared that most of the chaps really enjoyed themselves.

The weather has been getting getting organised. Dudley 43Q has put in some fine work with his s.s.b., and running the full range of bands. 2AK and 2AYR have been busy indeed, the hot weather frequently forcing them to peregrinate to the more congenial air-conditioned buildings of the town, but nevertheless they do put in a lot of time on the air. 807s have been the main topic. Jack has a new one and Lou, not to be outdone, has an AR7 which is doing a good job for him.

There will be a new call from the Silver City. The very first time we hear congratulations old chap. 1A9H from Kempsey is touring and we had the pleasure of a visit from Noel and his family recently. 1A9J (Bathurst) is on the air again and in between travels on official business will have a track down to Sydney on 40 m. we hope.

Results of the coming Contestation at Urunga, Easter week-end: best is as soon as possible with 2AYG or 1A9B.

## VICTORIA

The next general meeting of the Victorian Division of the W.I.A. is scheduled for Wednesday, 2nd February, 1955, at 8 p.m., in the Theatre of the Melbourne Technical College, when a lecture will be given by a member of the staff of the College.

### BOB'S TRANSMITTER TIPS

Bob 30J picked out a most delightful spot for the Xmas wind-up of the 10 to 15 hours. The tx was hidden at "Heaney Park," some eighteen miles from Melbourne in the Fernrie State Forest. The place was a perfect place for a picnic with tables and seats set under shady trees, but water available and also had a huge swimming pool. Most of the children had brought along their swim suits in the hope of such a treat, but the only thing that Bob couldn't provide was the weather which wasn't the best as it was showery on and off most of the afternoon, but this didn't dampen the spirits of the tx hunters by any means. Six equipped cars started from the assembly point where Syd 65J, who was touring Victoria, came in to have a word with the gang before they started.

Bob 30J, the rider of the tx, used a half wave doublet aerial supported on gum trees twenty-five feet high and supported in the center by a 100 lb. weight. The aerial was a line coming down the inside of a tubular steel mast. The overcast conditions and low cloud ceiling played tricks with the signal and resulted in the fact that every one of the competitors had to open their sealed envelopes. Bob hit the Xmas wind-up in regard to the sealed envelopes by writing the directions on the inside of the paper and sealing this down, then on the other side of this folded sheet he gave a bearing of the direction of the signal and the direction in which he was to proceed. He sealed it down, so that if a competitor lost the signal he would have to follow the direction in the direction given until he picked the signal up again. However, even this little clue was not enough this time and once again the tx has won. Eventually all the competitors arrived at the location with the exception of Eric 3AD who managed to get himself into a spot of trouble.

During the past two years, 80 mx tx hunters have seen a considerable amount of the country. Victorians have found out that there are spots there are if you only go a-hunting. In all, 56 attended the hunt which concluded with a picnic and a drink on the spot of sunshine. What about building some 80 mx receiving gear and come along and join in the next hunt.

The next TX Hunt will be held on Sunday, 13th February, 1955.

### CENTRAL WESTERN ZONE

Planned to see that a call sign has been allotted to Keith Tennant, 1A7S, of Murtoa, a new V.I.C. station. Many had the pleasure of f.b. contacts with Chas 1AC on Macquarie Island. By the time these notes go to press, Chas will have returned to Chas back to his parts where he will be doing some holiday relief at a local broadcasting station. 1A7S has been busy building a high powered rig with a 1000 watt 813 tube and a 1000 watt modulation; hope he also performs to your expectations. Merv.

Bob 30J erected a new set of rotary beams for 30 mx and 2 mx and according to reports they are working satisfactorily. Trev 1A7H has been busy with his 80 mx and 2 mx harvesting operations, but still manages to get on the air occasionally. They often work the Morabon boys on 3 mx with good signal strength. Jim 1DZ and Keith 1A9J have been active on the 80m band and at present are doing a spot of re-building in their respective stations. 1A9J was on the air recently after a couple of months re-building and seems to have made an excellent job as his signal was 7b. Heard that Allan 1A9B is now rapidly improving and will soon be

## SILENT KEY

It is with deep regret that we record the passing of—

Arthur Tonge, ex-VK4AR.

## TECHNICIAN

The Victorian Broadcasting Network requires the services of a Technician. P.M.G. Certificate is essential. Good wages. Apply to 123 Collins St., Melb., or Telephone Central 4124.

100 per cent. again, sorry to hear that your son and daughter have also been on the sick list Allan, sincerely hope that the New Year brings you all back to normal health.

#### NORTH EASTERN ZONE

Stan JAGG is heard on the bands from time to time and Frank ZZU was reported to be testing a new h.f.m. all-band tx a while back. Henry SHP is most well wound up on his VL3 Fire Brigade network, and probably Des ZBP is using his spare time to good effect helping him; incidentally, the impression is that in where Nor JAGG spends some of his radio time too. Howard SVV was one of the interesting people Ken SKR met at a social function at Benalla a while ago. It is understood that an Amateur who hopes to make a welcome appearance in the zone is Bruce QAC.

One of the bright spots in January "A.R." was that article by Jim JUK on the conversion of the BC series tx to the various Amateur bands. Also in the January "A.R." was a short and interesting article by Les SALE. The Editor can still use some more if anybody is interested in writing up their pet equipment.

Jack SAKC was reported to have enjoyed himself on the Mt. Stanley venture mentioned some issues ago. Vic SAEK was on the track of a good communications tx recently, while Jack SFP is reported active on his Rural Fire Brigade net. Lex SAIL is building a converter to work his ARB on 21 Mc. and Hugh SARF is heard of from time to time. Alan SUI was recently hard at work on his new v.h.f. equipment, and Syd SCI was wading into the 8 mX bands. Keith SJC must be sticking to the 80 mX DX. Although little is heard of Johnny SACK, Murray SHZ was written up in the provincial news-sheet reporting on the opening of the improved operating facilities at the local Commercial BC station.

A very interesting hour or so was put in recently while Des SCO detailed the working of a communications installation, amongst other things it was learnt that Doug has been allotted the call sign TLF. Chris SAGW was seen at a distance recently, and again from that provincial news-sheet, Alex SAT and his XYL are receiving congratulations on the arrival of a baby regularly, but the same is not reported at the moment of George SAG and Tom JTS. However Peter SAPP and Brian SAS are both

heard of indirectly. It is thought that Clarry and Vern are still "on deck," as is Jim, but nothing has actually been heard of our Associates just recently.

#### EASTERN ZONE

There has been quite a bit of activity of late. Joe ZFO was heard testing some new equipment recently, Ron APR has been on the air over the holidays, but believe he was not feeling quite his normal self, hope you are OK now OM. Doug JASE and XYL were last seen heading towards his old stamping ground at Inverell in VKZ. Jack SFX and family set out for Adelaide, not only to run the new Velox in, but also to collect a long awaited ARB coming from G-land. Oesie JARK will most likely accompany Jack's S840 now, so let's see you go to it and work the DX Ossie, you only need to work another 49 countries for the DX C.C.

Leo SEG is very quiet, nor has Arthur 3ABF been contacted for many months, guess he is too busy keeping the local ABC rig going. Bill JTY, at the opposition station, is on the bands when time permits.

#### QUEENSLAND

If you know of anyone interested in the Listeners' Group, which will hold a meeting in February, please contact the Secretary or pass the information on to the persons wishing to join.

This Division would like all members to submit ideas for the proposed holding of an Annual Convention to the Council for consideration. They hope to place something together from your ideas to make it a successful event, so everyone will want to come again. What about it, chap? Let's have them.

The Xmas get-together went off very well with some 30 there, but it was surprising how long it took to dispose of the liquid refreshments and some three persons were left around the wee small hours looking after the little that was left, while the philosophising by them was long and varied. An extra good get-together, and hope to see more there next year.

It is coming around to the time when we should be giving thought to the new Council. The old Council has been on the job for many years now, so what about giving considerations

to what sort of a job you could do to put the Division in the fore-front of affairs again. There is certainly a job for your talents instead of leaving it to a few to carry the burden. We find most of the Council at present have several duties to perform and the welcome chance of abiding some of the load. So please, your nomination!

Well chaps that's all, holiday time is not conducive to writing. See you at the meeting. It is with regret that we record the passing of Arthur Tange, ex-VK4AR, who was prominent in W.A. affairs pre-war in Queensland. He was a member from early 30's to 1959. The Division extends their deepest sympathy to his relatives.

#### SOUTH AUSTRALIA

The VKS Division of the W.I.A., the Division which is always on the ball, held its monthly general meeting for December in the club rooms and as is the usual practice it took the form of a Xmas Get-Together. More than a hundred members and visitors came along armed with loads of goodies and the spirit of Xmas, and a jolly good time was had by all. Naturally very little business was transacted and the main entertainment for the night was provided by Associate member Geoff Smith, who gave an illustrated talk on his recent trip by caravan to Mt. Buffalo. Geoff excelled himself in his talk, both from the excellence of his coloured slides and also from the amount of information he conveyed concerning the trip without talking too much. He concluded his talk with a selection of slides taken at the time of the visit of Her Majesty the Queen, to Adelaide. "Doc" SMD, in his speech of thanks, summed up the opinion of all present in a few well chosen words, and the prolonged applause at the close of the vote of thanks was clear evidence of the success of the talk.

A short "smoke-oh!" followed the talk and this gave the Council members a chance to set the tables with the goodies and the liquid refreshments ready for the combined attack of the members. At a given signal the members lined up and made a combined attack on the tables, and for a half-an-hour or so no sound was to be heard but the steady munching and crunching of the members' jaws as they did

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their best to make the tables look like Mother Hubbard's cupboard. It goes without saying that the more food the better. The more the better, and at the conclusion of the feast it was impossible to find even a crumb on any one of the tables. While appetites were for the appetites of the members and also for the quality and quantity of the goodies brought along by the members.

Once again proved beyond any doubt that this type of Xmas Get-Together every December meeting is just what the members want and the splendid attendance of members plus the tables laden with the finest of goodies and the rag-chew, means that the Xmas Get-Together has come to stay. Members of the club are ever grateful and thank you for the way in which they carried out their individual duties, and can sit back and feel well satisfied with their efforts in the 1954 Xmas Get-Together.

Among the welcome visitors were Messrs. R. Redunary (5KX), C. Moule (5CX), R. Grundy (5BG), D. Tacey (5DW, ex-5DW), W. Beesley (5VB, ex-4BV), and of course John Clifton (5H1). We hope that all these gentlemen enjoyed themselves and we also hope that we have enjoyed theirs, although I doubt that of course John 5H1 can only manage to attend the Xmas meeting due to the difficulty of transporting him to and from his QTH. Incidentally, this transporting is usually handled by "Doc" SMD and Ken 5XC in the usual Amateur spirit, and our thanks go to them for the gesture.

As chief steward, it was my duty to keep the liquid refreshments flowing and it was whilst carrying out this welcome duty that I watched my little party of 12 members and 10 VKX signals the following night, and thus work myself some DX. I put aside in the kitchen all the strawberry sponge cakes, all the cream cakes, all the cream cakes, in fact anything that would come in handy to hand round at the conclusion of the feast to all the well known DX men in the hope that they would be so indisposed next evening that the said DX would only have me to come back to. Well, I did it then up. By the time that I had been around for 40 or 45 minutes, I had seen the mere sight of me appearing at the kitchen door was enough to turn them green at the gills, and finally to tempt them when it became necessary for me to have a nibble or two at the iced fancies, etc., just to show them that all was on the up and up.

The DX was extra good the following night—but the sound-bombing began. The doctor advised me to stay in bed for a day or two to get over my bilious attack. In fact he said that if I did not do as he advised, my fallen chest would remain in that state indefinitely. (Wonder if the doctor was a DX man?—Ed.) Just goes to show how low these DX men will stoop to block me, killing me with cakes, knowing how weak and delicate my stomach is. Anyway, I bet I had a few mates.

Quite a number of regulars did not put in an appearance at the meeting and I heard later that the reason was that members of their families were laid up because of colds, etc. We hope that all are well now and we were glad that you could not come along, nevertheless we will be back in the same spot next year and will take pains to block me, killing me with cakes, knowing how weak and delicate my stomach is. Anyway, I bet I had a few mates.

#### SOUTH EAST AREAS

The first news of importance from the South East, as far as I am concerned, is that I have a new correspondent for the monthly notes in Stuart 5MS, Colin 5CJ having apparently thrown in the towel. I trust that it is not because I have been such a bad driver in the past. Col, but anyway you have done a good job for many years and I sincerely express my thanks for all your help. Hope that you and yours are in the pink.

SKU and his XYL, in other words, Erg and Joyce, had the best Xmas present in the world this year in the form of another honey beekeeping boy, and all are doing well. It has not stopped Erg from continuing his c.w. activities because he reports several new countries added to his list this month. He has been tinkering around with his bean a little but cannot see any change in the results. 5FD has been noted as being a little more active in radio and reports that the family are progressing very well. Apart from a few fireworks on Guy Fawkes Day from his electrolytic, John finds everything working well. It is to be hoped that a few more hot days will come along soon and that it would appear that John only comes up on the air when it is over a century.

5CH is still building his shack; what a shack it must be, he has been on that shack for the past four months; it certainly cannot be a little shack! Anyway, Claude is still finding time

to build up some test equipment and the examples of his work which were displayed at the monthly meeting of the S.E. boys spoke for themselves in no uncertain manner. Will we be seeing you down here soon Claude? For one expects to meet you if I get into the habit. I thought that John 5JA had at last been heard on the air. However, on second glance, I find that he will soon be starting on a New Year's Eve and then on the 1st, and for a little less time for activity in connection with Amateur Radio. Oh well, I can only hope and pray.

5TW is listed among the missing this month and the boys suggested that he was on an absentee from the monthly meeting because the tea and sugar suds were due. Speaking for myself, and knowing Tom as I do, I refuse to believe this and only say that he has been so busy at his vocation that he has had no time for anything else. As a fellow worker in the broadcasting game, I know just how busy one can be. Ahem! 5CJ, if all reports can be believed, thoroughly enjoyed himself at Xmas time, but Xmas time or not, Col managed to be heard on 40 and 20 m at times. Leo Magrath (is that spelt right Leo?) now has his limited ticket and hopes that a number of the boys will be so kind as to give him his chance to do some experimenting. I think it will be a certainty, Leo.

From Naracorte comes the news that Brian Gellat, of Hyman, also has his limited license and is hoping to take the extra license in March, but harvesting activities are proving a bit of a stumbling block. Associate member Jack Fowler is fully occupied with bushfire work this time of the year, but is 5CJ, 5JA, and many others in the district. 5MS has been operating mostly on 40 and 20 m, although he did put in an appearance on 15 m using his 40 m antenna for most of the year. I gather that Stuart was most active over the Xmas period dodging the XYL who seemed to have the most peculiar ideas as to how to spend that period of the year. It goes without saying that she eventually caught up with him and paraded the word (is mine!) between to contact two new countries in his opinion. I also note that he has been doing a good bit of testing his equipment with the transmitter and a c.r.o. and managed to find quite a number of things that do not show up on the air. I did seem to hear the same lines once, but gave it away very hurriedly when I saw just what was living inside my modulator. As for what was in the tx, well, only a crayfish and beer supply could produce such a revolting collection of animals. Never do so, Stuart, leave well alone!

Several visitors called in at Mount Gambier over the Xmas period and included 5FV ASE, who stayed around for the best part of a month, and also Bill 5BL who was around for the New Year period.

By the time that these notes are being read it is hoped that the R.D. trophy will have been on display at Mt. Gambier during the week that it will be proclaimed a city and also that the two boys that made such a grand showing in the contest will have been given the publicity they deserve. Niall and Stuart to Stuart 5MS, who did so well in the phone section, and also Erg 5KU, who held more than his own in the c.w. section. We salute you boys.

At this time each year in the magazine I usually apologise for not being able to answer all of the Xmas and New Year greeting cards that find their way into my desk, and to my annoyance of my harmonic and the XYL, who have never been able to see my fatal fascination for the members of the club. The real reason for my inability to reply to them all is the fact that my £1,000 a year salary is usually in a decidedly sick state at this time of the year and I only have my salary from the magazine to splash about on greeting cards, etc., etc., and of course that does not go very far (compensation department, please note). (Being a semi-skilled journalist, we are raising your salary 14 times—Ed.) However, I do appreciate the good wishes and am glad that if you are all fair dinkum about these notes, then you must all be as weak in the same way as I am. To those Amateurs who so correctly summed up the reason for the cards which should have been packed in ice, I also say thank you, but I have a team that will look after my cards in the future and I have many thanks, but do I really remind you of that quadruped, and did you have to wish me a better thought? To the devoted pair of readers from Geraldton, who have sent me spare my blushes, and last but not least, thanks again to all who used the Xmas period as an excuse to have a shot at me. I know if I expect you fellows to take it in the spirit with which it is dashed out, then I must do the same. Off the record, I lapped it up!

Wyk 5WM announced his engagement this month and of course has had to put up with the usual remarks and suggestions. He has not introduced me as yet to the lady of his choice, and if the truth is to be known, does not intend to do so. However, if he thinks by doing this that his intended will not learn the dreadful truth about his evil smelling pipe, then he is in for a shock, because if necessary I will settle a snail or so of the same (filtering name) and send it to her as my share of the Gypsy's warning. POOHHEHHH!

Quite a number of Amateurs visited the city of culture and high ideals (Pincoff please note) over the Xmas period and included Ray 3ATN from Birchlea, Leo W2JAC (of the Pioneer), Cliff W6 (of the Sierra) and also Les Gandler (ex-5SL, and now an electrical contractor 40 miles or so from Perth), who was passing through to VK3 on a holiday, after an absence of twelve years from Adelaide. It was good to see these fellows, and Ray 3ATN gladdened my heart considerably by telling me that he had found his soul mate in VK3 and might possibly in the future have a VK3 call sign. Another deserter from the cause of Pincoff, my propaganda is at last reaping results.



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